

**ABSTRACT**

The present invention relates to inspection methods and systems utilized to provide a best means for inspection of a wafer. The methods and systems include wafer-to-reticle alignment, layer-to-layer alignment and wafer surface feature inspection. The wafer-to-reticle alignment is improved by the addition of diagonal lines to existing alignment marks to decrease the intersection size and corresponding area that a desired point can reside. Layer-to-layer alignment is improved in a similar manner by the addition of oblique and/or non-linear line segments to existing overlay targets. Also, providing for wafer surface inspection in a multitude of desired diagonal axes allows for more accurate feature measurement.